

REMARKS

Entry of the foregoing, re-examination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.112, and in light of the remarks which follow, are respectfully requested.

Claims 9 and 14 have been amended to correct typographical and grammatical errors. New claims 21 and 22 have been added. Support for claim 21 may be found, for example, in paragraph [0051] on pages 18-19 of the specification, while support for claim 22 may be found in paragraph [0022] on pages 9-10 of the specification. Claims 1-22 are now pending in this application.

Claims 1-8 were rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 6,740,460 to Tomita et al. in view of JP 11-265120 and published U.S. Patent Application No. 2003/0134220 to Emoto et al. for the reasons set forth in paragraph (2) of the Office Action. Reconsideration and withdrawal of this rejection are respectfully requested for at least the following reasons.

Initially, Applicants point out that Tomita et al. '460 does not disclose or suggest toner particles having a Vickers hardness as defined in claim 1. Although JP '120 discloses toner particles having a Vickers hardness greater than 16.0 HV 0.01 (10 g) (page 2 of translation), no motivation is seen to combine the respective teachings of Tomita et al. '460 and JP '120. Thus, the objective of JP '120 is to provide a toner having a Vickers hardness in a specified range in order to improve embedment of external additives when applied to a toner recycling system. On the other hand, Tomita et al. '460 relates to improving fluidity and transferability of toner particles and does not mention any toner recycling system nor recycle use of toners. Accordingly, there would have been no motivation to combine the

teachings of JP '120 relating to solving problems in a toner recycling system with the disclosure of Tomita et al. '460.

Emoto et al. '220, like Tomita et al. '460, does not relate to toner recycling.

Furthermore, data in the present specification shows the unexpected nature of the presently claimed invention. Specifically, the examples in the present application show that excellent results are obtained when the claimed average particle size, particle size distribution, roundness and Vickers hardness are satisfied. The toner particles in Example 8 in Table 1 on page 50 have an average particle size, particle size distribution and roundness within the range specified in the present claims, but the Vickers hardness is not within the scope of the present claims. As shown in Table 2, evaluation as a toner shows irregularities, faded images and transferring efficiency which are unsatisfactory after a printing process of 5000 copies. In comparison, the particles in Example 1, in which average particle size, particle size distribution and roundness are the same or almost the same as those of Example 8 but Vickers hardness is within the specified range of the present invention show excellent properties even after a printing process of 5000 copies.

Moreover, as shown by Examples 7 and 9, even if Vickers hardness is within the specified range, excellent effects cannot be obtained when particle size distribution or roundness is outside the specified range as shown in Table 2. In Example 7, Vickers hardness is 16.0HVO.01 (10 g) which is within the range specified in JP '120. However, the particle in Example 7 does not satisfy the claimed roundness thereby resulting in unsatisfactory performance. Accordingly, the data in the present specification shows that acceptable results would not be attained even if the Vickers hardness disclosed in JP '120 was applied to the invention of Tomita et al. '460 unless the other particle characteristics set forth in the claims were satisfied.

Applicants respectfully submit that the §103(a) rejection of claims 1-8 is unsound because:

(1) no teaching exists in the cited references which would motivate those of ordinary skill in the art to combine the disclosure of JP '120 with that of Tomita et al. '460 and Emoto et al. '220; and

(2) the data in the specification provides proof of unexpected results as discussed above.

In view of the above, the §103(a) rejection of claims 1-8 should be withdrawn.

Claims 9-20 were rejected under 35 U.S.C. §103(a) as unpatentable over Tomita et al. '460 in view of JP '120 and further in view of U.S. Patent No. 5,915,150 to Kukimoto et al. for the reasons advanced in paragraph (3) of the Office Action. Reconsideration and withdrawal of this rejection are earnestly requested in view of the following remarks.

Kukimoto et al. '150 has been relied on in the rejection for its disclosure of a non-magnetic one-component contact developing device and toner particles. However, as with Tomita et al. '460, Kukimoto et al. '150 is not concerned with toner recycling systems or problems associated with toner recycling. Since there is no disclosure in Tomita et al. '460 or Kukimoto et al. '150 relating to toner recycling, there would have been no motivation for those of ordinary skill seeking to modify the inventions thereof, to look to documents related to toner recycling.

Furthermore, even if motivation existed to combine the references, the data in the present specification provides proof of the unexpected nature of the claimed invention. Merely applying the teaching of JP '120 concerning Vickers hardness to the toners of Tomita et al. '460 and Kukimoto et al. '150 would not lead to Applicants' invention. The data shows that the Vickers hardness, particle size distribution, volume-average particle size and degree

of roundness must all be within the ranges of the present claims in order to attain the unexpected benefits of the invention.

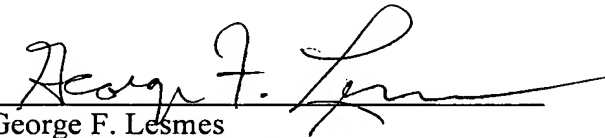
For at least the above reasons, the §103(a) rejection of claims 9-20 should be withdrawn. Such action is respectfully requested.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at (703) 838-6683.

Respectfully submitted,

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